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[54] **IN-CONTAINER SACHET**

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[51] **Int. Cl.**[7] **B65D 85/72**

[52] **U.S. Cl.** **206/217**; 426/112; 53/471

[58] **Field of Search** 206/205, 216, 206/217, 219, 457, 459.5; 53/474, 471; 426/112

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,399,158	8/1983	Bardsley et al.	206/217
4,518,082	5/1985	Ye	206/217
4,911,320	3/1990	Howes	220/20
4,930,652	6/1990	Murphy et al.	220/90.2
5,046,631	9/1991	Goodman	220/85 R
5,056,659	10/1991	Howes et al.	206/217
5,056,681	10/1991	Howes	220/522
5,080,247	1/1992	Murphy et al.	220/706
5,099,232	3/1992	Howes	340/815.21
5,244,112	9/1993	Murphy et al.	220/706
5,283,567	2/1994	Howes	340/815.69
5,482,158	1/1996	Plester	206/217
5,524,788	6/1996	Plester	220/522
5,547,103	8/1996	Murphy et al.	220/709
5,728,415	3/1998	Troska	206/217
5,827,555	10/1998	Thorne et al.	426/112
5,899,351	5/1999	Murphy et al.	206/217

FOREIGN PATENT DOCUMENTS

94 12 713	9/1994	Germany .
WO 95/00414	1/1995	WIPO .
WO 97/21613	6/1997	WIPO .

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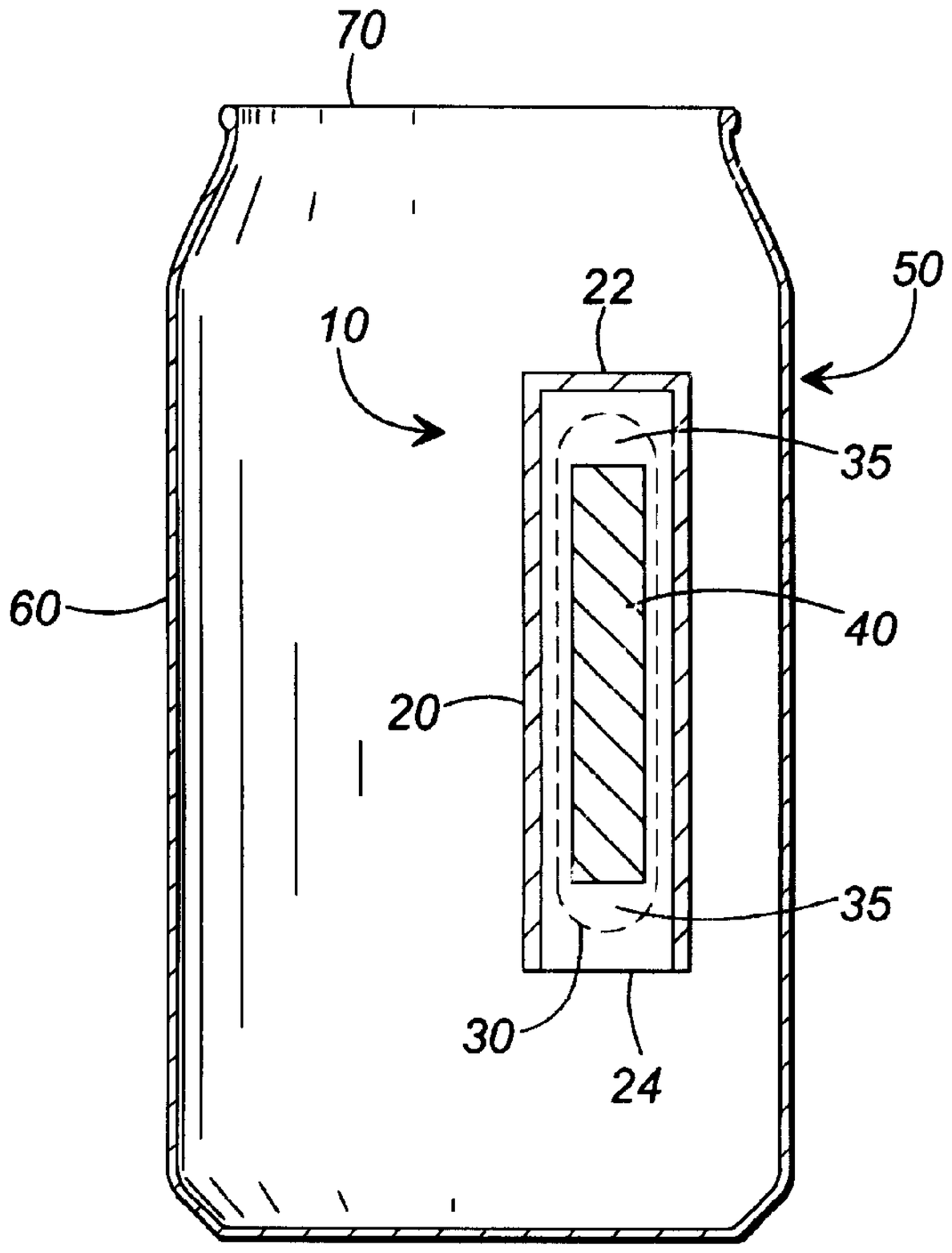
[57] **ABSTRACT**

A sachet for insertion into a beverage container prior to the sealing and pressurization of the beverage container. The sachet is made from a gas permeable and substantially liquid impermeable material. The article is positioned within this material and sealed with substantially no excess gas contained therein. The sachet sinks when dropped into the beverage container and subsequently floats after the container is sealed and pressurized as gas from within the container penetrates into the sachet until equilibrium is reached. The sachet then rises within the beverage container when the container is opened.

18 Claims, 2 Drawing Sheets



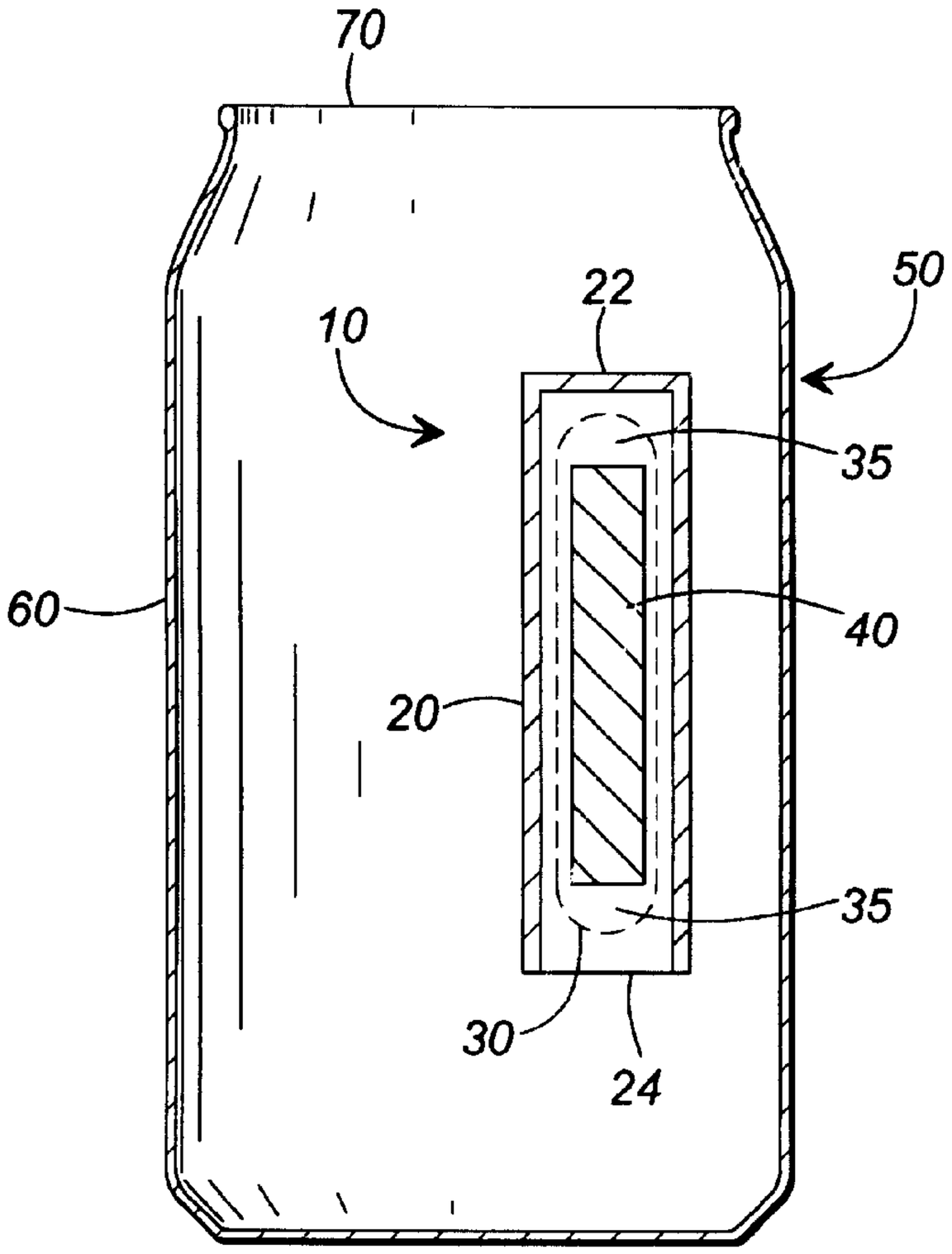


FIG. 1

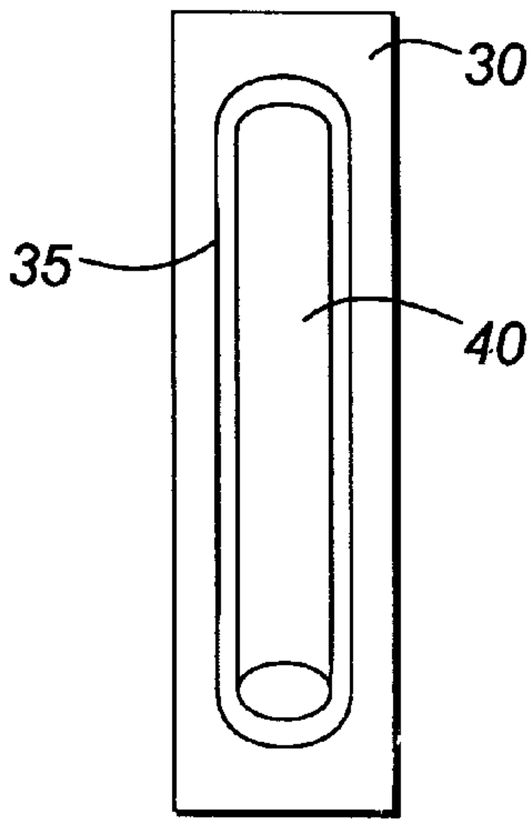


FIG. 2

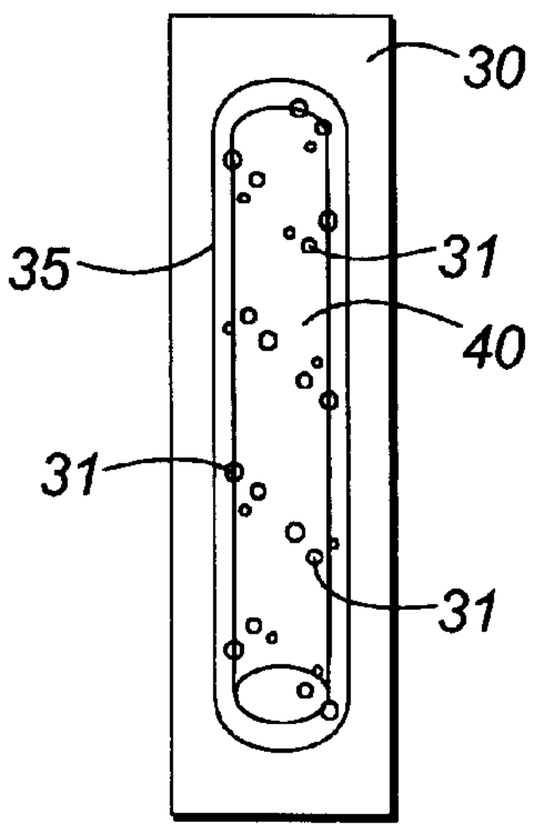


FIG. 2A

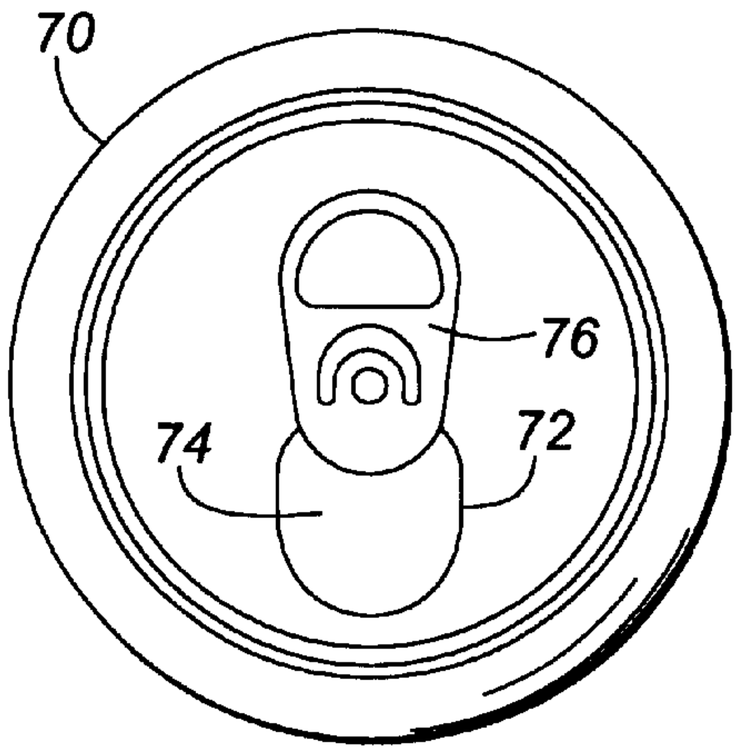


FIG. 3

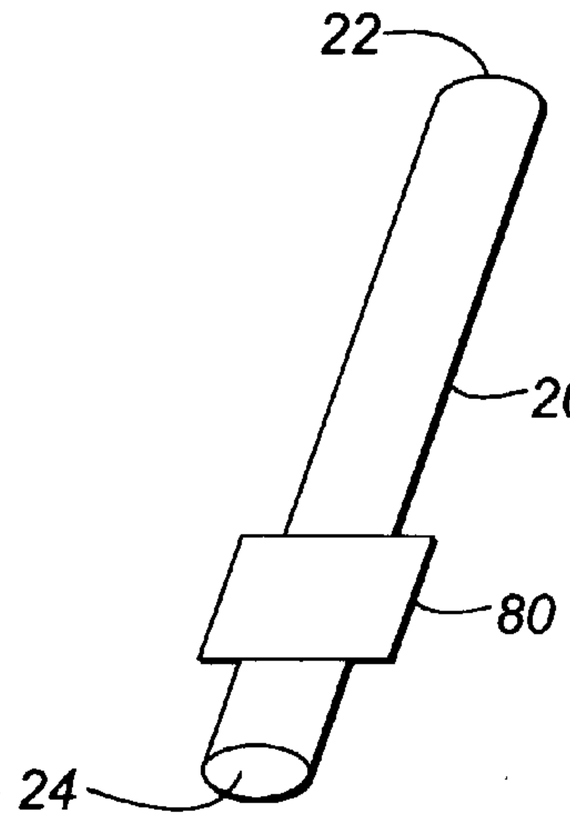


FIG. 4

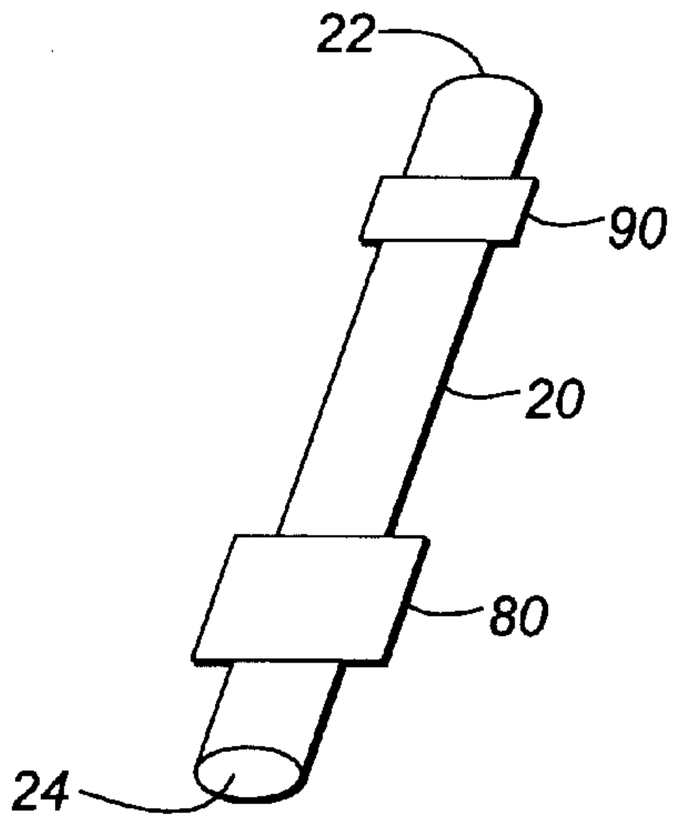


FIG. 5

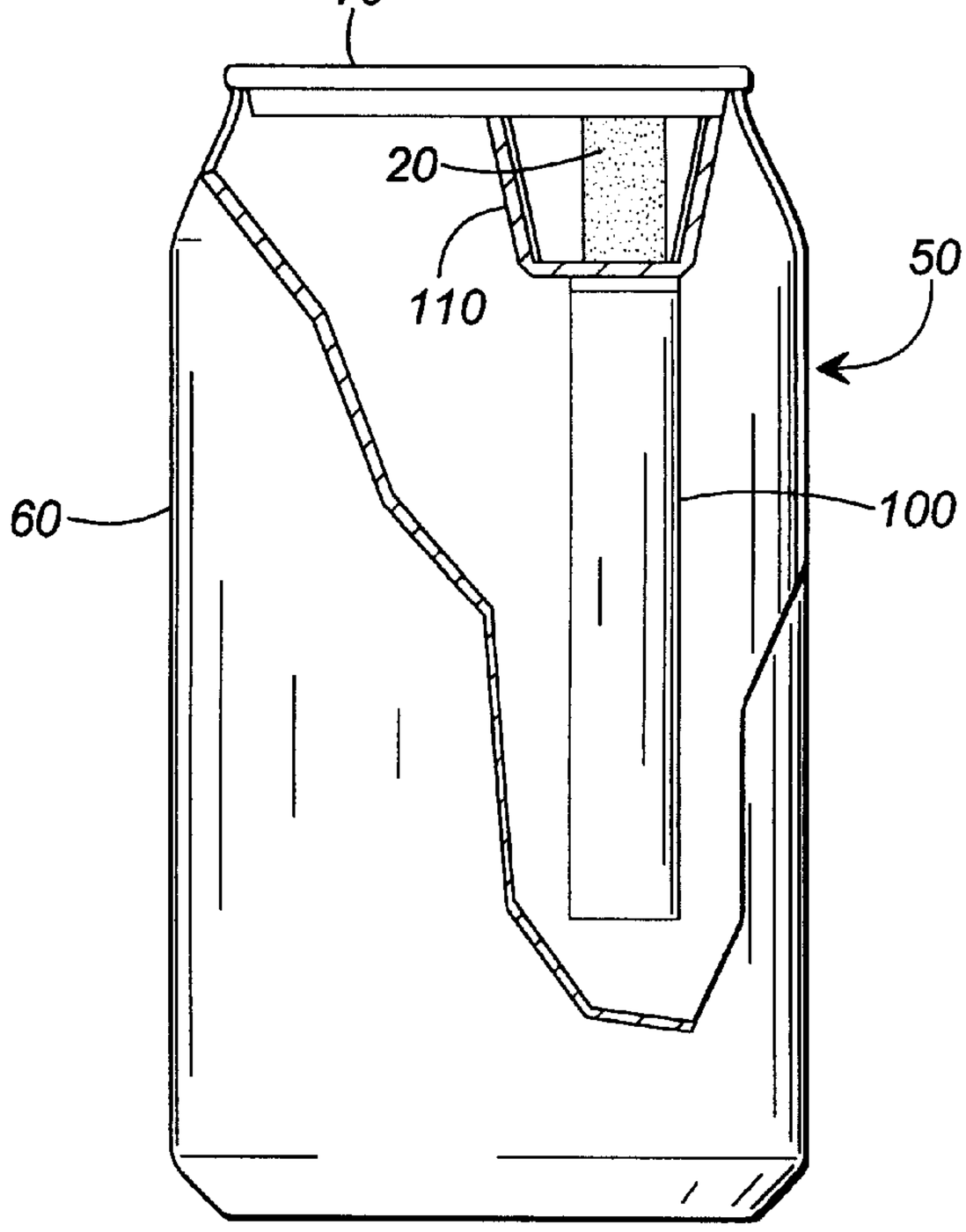


FIG. 6

IN-CONTAINER SACHET

TECHNICAL FIELD

The present invention relates generally to a sachet for insertion in a beverage container, and more particularly relates to an air permeable sachet for delivering an article in a beverage can.

BACKGROUND OF THE INVENTION

The packaging for food and beverages often includes promotional material such as coupons and various types of advertisements. Dry goods such as cereal often include a coupon or some sort of promotional prize within the packaging itself. This type of in-package promotion is also known with beverages, although there are additional concerns with beverages because of possible contamination by the promotion and also with the safe delivery of the promotion to the consumer. As a result, most in-container beverage promotions focus on a "under the cap" approach, such as that described in commonly-owned U.S. Pat. No. 5,524,788 to Plester entitled "Closure With Hidden-Gift Compartment."

Known in-container beverage promotions have generally used mechanical delivery systems for holding the promotion, prize, or other article within the container in proper orientation with the container opening. For example, International Application No. PCT/GB94/01310 to Benge, et al. describes a container having a lid made from a metal/polymer laminate. This lid has a fixedly-attached polymer guide tube positioned underneath the pop-top. A prize sachet is positioned within the guide tube. The lid, including the guide tube and the prize sachet, is then inserted into the beverage can and the can is sealed. When the consumer opens the can, the prize sachet is described as floating to the surface in the guide tube on its own or with the aid of a buoyant material such as cork or expanded polystyrene. The prize sachet itself is described as made from a foil material or other material that prevents the ingress of liquid or moisture.

A more complex design is shown in U.S. Pat. No. 5,056,659 to Howes, et al. Howes describes a sealed prize compartment separated from the lower part of the container. The sealed guide tube is spring activated such that the prize is ejected when the consumer opens the can. U.S. Pat. No. 5,046,631 to Goodman also shows a spring activated guide tube. The guide tube is sealed to the lid of the can by an adhesive. Another delivery device is shown in commonly-owned U.S. Pat. No. 5,482,158 to Plester entitled "Promotional Device For Delivering A Prize From A Beverage Can."

Although all of these designs are adequate for the ultimate purpose of delivering a prize or promotion of some sort to the consumer from a beverage can, these designs suffer numerous drawbacks. For example, each of these disclosures involves a complex mechanical delivery system. Several of these references use springs or other types of "launch" systems. Compared to an ordinary beverage container, these mechanical delivery systems are expensive to manufacture and significantly slow down the beverage filling process.

Each of these references also requires the delivery system to be attached to the top lid of the can. The lid and the delivery system are then placed into the lower part of the can and then sealed. This type of container design, however, is not compatible with modern high-speed filling and sealing procedures. Modern manufacturing procedures involve

manufacturing the lower part of the container, i.e., the bottom and the sidewalls, and a separate top lid for sealing the open container. In a manufacturing process known as "seaming", the open container is filled with the beverage and then the lid is passed just over the top of the container by a few millimeters and rolled into place. Because each of the disclosures referenced above has a delivery system attached to the top lid of the can, the system will not work with the horizontal sealing procedure, i.e., the lid and the attached delivery system cannot be positioned in the can with a single horizontal motion.

Attempts to accommodate this type of sealing procedure have used glues and mechanical seals to hold an article, such as a drinking straw, at the bottom of the can during the sealing process. For example, U.S. Pat. No. 4,930,652 to Murphy et al., discloses a soluble gelatin or binder to hold a straw in place during manufacture. The binder then dissolves into the beverage. Again, although this process may be acceptable for the ultimate goal of delivering an article in a beverage container to a consumer, the use of any type of soluble material is not favored given the possible affect the material may have on the taste of the beverage.

There is a need in the art, therefore, for a device and method for placing a prize sachet or other article into a beverage container. The device and method must be compatible with modern high speed beverage filing equipment and operations. Further, the device and method must not affect the taste or composition of the beverage.

SUMMARY OF THE INVENTION

The present invention provides a sachet for insertion into a beverage container prior to the sealing and pressurization of the beverage container. The sachet is made from a gas permeable and substantially liquid impermeable material. The article is positioned within this material and sealed with substantially no excess gas contained therein. The sachet sinks when dropped into the beverage container and subsequently floats after the container is sealed and pressurized as gas from within the container penetrates into the sachet until equilibrium is reached. The sachet then rises within the beverage container when the container is opened.

Specific embodiments of the invention include the use of a thermoplastic material as the gas permeable and substantially liquid impermeable material. This material may be a thermoplastic, including ethylene copolymers such as polypropylene and polyethylene; polycarbonate; polyesters such as PET (polyethylene terephthalate); nylons; or any type of conventional plastic material. The specific gravity of the material, with fillers, is generally greater than about 1.0 with a carbon dioxide permeation rate of about 20 cc.-mil./100 sq.in.-day-atm. or more. The material is generally in the form of a thin film. The article sealed within the sachet remains substantially dry while gases from within the pressurized beverage container penetrate into the sachet.

The sachet may be positioned within a hollow tube such that the sachet remains intact as the gases from within the pressurized beverage container penetrate into the sachet. The hollow tube is generally made of a thermoplastic material in a substantially rigid form. A float and a weight also may be positioned about the hollow tube. The sachet is generally used within a beverage container having a cylindrical body and a lid with an orifice. The sachet may be positioned within the beverage container in a delivery tube positioned in the vicinity of said orifice.

The method of the present invention provides for delivering an article in a beverage container. The method includes

the steps of sealing the article in a sachet that is gas permeable and substantially liquid impermeable, filling the beverage container with a carbonated beverage, dropping the sachet in the beverage container such that the sachet sinks or is suspended within the container, pressurizing the beverage container, penetrating the sachet with gases from the carbonated beverage until the pressure within the container and the sachet are at equilibrium, and opening the container such that the pressure within the container is released and the pressure within the sachet causes the sachet to rise within the container. The method may further include placing the sachet in a hollow tube such that the sachet substantially fills the hollow tube. The beverage container is sealed and pressurized by passing the top lid over the open end of the beverage container and seaming the top lid into place. Alternatively, the sachet may be placed in the beverage container after the container has been filled.

It is thus an object of the present invention to provide for a sachet that can be used with modern, high-speed filling equipment.

It is another object of the present invention to provide a sachet that sinks or is suspended when first placed in a beverage container and then absorbs gases from within the beverage container over a predetermined period of time such that the sachet floats when the container is opened.

It a further object of the present invention to provide a sachet that is gas permeable and substantially liquid impermeable.

It is a still further object of the present invention to provide an in-container sachet that delivers an article to the consumer without the use of a mechanical delivery device. It is a still further object of the present invention to provide an in-container sachet that delivers an article to the consumer without the use of glues or other types of soluble binders.

Other objects, features and advantages of the present invention will become apparent upon reviewing the following description of preferred embodiments of the invention, when taken in conjunction with the drawings and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** a cross-sectional view of the delivery device within the container.

FIG. **2** is a plan view of the sachet.

FIG. **2A** is a plan view of the sachet with gas vents.

FIG. **3** is a plan view of the container lid.

FIG. **4** is a plan view of the prize tube with the float.

FIG. **5** is a plan view of the prize tube with the float and the weight.

FIG. **6** is a cut-away view of the container showing the delivery device in the delivery tube.

DETAILED DESCRIPTION OF THE INVENTION

Referring now in more detail to the drawings, in which like numerals refer to like parts throughout the several views, FIGS. **1** and **2** shows a delivery device **10** embodying the present invention. The delivery device **10** includes a prize tube **20**, a sachet **30**, and an article **40**. The delivery device **10** is used with a conventional beverage container **50**, such as an aluminum can.

The prize tube **20** is a substantially rigid, hollow tube with a first end **22** and a second end **24**. Although the term tube **20** is used and preferred herein, it is understood that any shape may be used as the prize tube **20**. The first end **22** may be closed, perforated, or open. The second end **24** is generally open. The prize tube **20** is made from a thermoplastic material including ethylene copolymers such as polypropylene and polyethylene; polycarbonates; polyesters such as PET (polyethylene terephthalate); nylons; or any type of conventional plastic material. The material must be acceptable for use with beverage containers on the basis of safety and taste. The specific gravity of the material should be at least about 1.0 and preferably equal to or greater than the specific gravity of the beverage (generally about 1.03 in the example of a soft drink) such that the prize tube **20**, along with the sachet **30** and the article **40**, will sink or at least be suspended within the container **50**. If the material has a specific gravity of less than 1.0, for example polypropylene has a specific gravity of approximately 0.89, colorants or other additives can be added to the material to increase its specific gravity to acceptable levels.

Further, the specific gravity of the article **40** may have an impact on the selection of the materials. An article **40** with a relatively high specific gravity can be used with a prize tube **20** of a material with a relatively lower specific gravity. The weight of the article **40** also will have an impact on the overall buoyancy of the delivery device **10**.

The sachet **30** is generally in the form of a sealed bag or other type of enclosure, such as a blister pack, a capsule, etc. The sachet **30** is made from a gas permeable, substantially liquid impermeable material. Examples for the sachet **30** material include the thermoplastic materials described above, generally in the form of a thin film. The material must be acceptable for use with beverage containers on the basis of safety and taste. The specific gravity of the sachet **30** material also should be more than about 1.0. As with the prize tube **20**, the weight of the article **40** also will have an impact on the buoyancy of the sachet **30** and the delivery device **10** as a whole.

By the term "gas permeable", it is meant that the sachet **30** will permit gases contained in the beverage, such as carbon dioxide in the example of a carbonated soft drink, to permeate through the wall of the sachet **30** over a predetermined period of time, generally the amount of time it takes for the beverage to reach the consumer. For example, the carbon dioxide permeability rate for PET (polyethylene terephthalate) is generally about 20–40 cc-mil./100 sq.in.-day-atm at twenty-five (25) degrees Celsius while the carbon dioxide permeability rate for polypropylene is about 450–900 cc-mil./100 sq.in.-day-atm at the same temperature. The permeability rates of certain polyethylenes can be even higher. Alternatively, as is shown in FIG. **2A**, gas vents **31** may be incorporated into the sachet material to increase the gas permeation rate. Likewise, by the term "substantially liquid impermeable", it is meant that the beverage will not penetrate through the sachet **30** material during a second predetermined period of time, generally substantially more than the expected shelf life of the beverage. For example, the water permeability rate for PET (polyethylene terephthalate) is generally about 4 gm.-mil./100 sq.in.-day-atm while the carbon dioxide permeability rate for polypropylene is about 0.7 gm.-mil./100 sq.in.-day-atm. The ambient temperature can have a significant impact on both gas and liquid permeability. The rate of permeability is increased as the temperature is increased.

The sachet **30** also must have sufficient burst strength such that the sachet material will remain intact both during permeation and when the equilibrium pressure outside the sachet **30** suddenly drops. The burst strength of the thermo-

plastics described above range from about 1200 pounds per square inch for certain types of polyethylene to 10,000 pounds per square inch or more for certain types of PET. In circumstances where there is no need to keep the article **40** dry, the sachet **30** need only be gas permeable, such that materials with relatively lower burst strengths can be used. The density of the prize tube **20** or the article **40**, however, may need to be sufficient to keep the delivery device **10** floating after the sachet **30** bursts.

The article **40** may be a prize, a promotion, or other object such as a drinking straw. In FIG. **2**, a tightly rolled bank note is shown as the article **40**. The article **40** is sealed within the sachet **30** with as little void space **35** as possible to limit the amount of gas within the sachet **30** which may have an impact on its buoyancy. Alternatively, the article **40** can be sealed with a near vacuum. The use of such a vacuum may increase the permeability of gases into the sachet **30**. The sachet **30** is sealed by conventional methods. For example, a linear low density heat seal may be used in the case of a sachet **30** made from a PET material. The strength of the seal should be relatively comparable to the strength of the material.

As is shown in FIGS. **1** and **3**, the container **50** is preferably a conventional aluminum can having a cylindrical body **60** and a top lid **70**. The cylindrical body **60** and the top lid **70** are joined by the seaming operation described above. The container **50** is usually, but not necessarily, filled with a beverage, such as a carbonated soft drink or other type of beverage, before the seaming process. The top lid **70** has a substantially circular or oval orifice **72** therein for pouring the beverage out of the container **50**. The orifice **72** is sealed by a closure tab **74**. As is well known, the closure tab **74** is opened by a lever ring **76** positioned on top of the lid **70** adjacent to the closure tab **74**. The delivery device **10** also can be used with any other type of conventional beverage container such as glass, plastic, or laminate bottles or cartons. FIG. **4** shows a further embodiment of the delivery system **10**. In this embodiment, a float **80** is attached to the prize tube **20**. The float **80** surrounds or is attached to the prize tube **20** at one end, substantially adjacent to the second end **24**. The float **80** is preferably made from the same material as the sachet **30** or from conventional types of buoyant material such as a closed cell foam. The float **80** may be used increase the buoyancy of the delivery device **10**, i.e., the combination of the prize tube **20**, the sachet **30**, and the article **40**.

FIG. **5** shows a further embodiment of the delivery device **10**. This embodiment further includes a weight **90**. The weight **90** can be made from the same material as the prize tube **20** or other conventional materials with a large enough specific gravity such that the material does not float in the beverage. The weight **90** also surrounds the prize tube **20**, substantially adjacent to the first end **22** or adjacent to the float **80**. The weight **90** may be used when the density of the delivery device **10**, i.e., the combination of the prize tube **20**, the sachet **30**, the article **40**, and the float **80** (if desired), is less than the density of the beverage before any gas has permeated into the sachet **30**.

In use, the article **40** is sealed within the sachet **30** as described above. The sachet **30** is positioned within the prize tube **20**. The sachet **30** substantially fills the tube **20**, leaving little or no void space where trapped air may affect the buoyancy of the delivery device **10**. The delivery device **10** is then dropped into the cylindrical body **60** of the container **50**. The cylindrical body **60** preferably is filled with the beverage prior to the insertion of the delivery device **10**. Alternatively, the delivery device **10** may be inserted into the cylindrical body **60** of the container **50** prior to filling depending upon the nature of the filling system.

Because the sachet **30** and the prize tube **20** have few or no internal voids **35** for the collection of gases and because the density or the weight of the delivery device **10** is more than the density of the beverage, the delivery device **10** sinks or is suspended within the container **50**. By use of the term "sink" or "sinks", it is meant that the delivery device **10** does not float to the top of the container **50**, i.e. the delivery device **10** may sink or be suspended. Because the delivery device **10** does not float to the top of the cylindrical body **60** of the container **50**, the cylindrical body **60** and the lid **70** can be joined in the conventional high speed seaming process described above. The lid **70** is positioned horizontally over the cylindrical body **60** and joined without any obstruction caused by the delivery device **10** floating to the top of the cylindrical body **50** or otherwise interfering.

After the container **50** has been sealed, the container **50** generally is placed into normal distribution channels for ultimate delivery to the consumer. This process generally takes at least several days or weeks. During this time, the delivery device **10** will be subject to the internal pressure of the container **50**.

For example, the container **50** is generally sealed at fifty-five (55) pounds per square inch of pressure with four (4) volumes of carbon dioxide in the case of a carbonated soft drink. Over time, the gas pressure within the container **50** will seek equilibrium with the partial pressure within the delivery device **10**. Because the sachet **30** is made from a gas permeable material, carbon dioxide and other gases from within the container **50** will penetrate into the sachet **30** until the pressure within the sachet **30** reaches equilibrium. The sachet **30**, any void spaces **35** within the sachet **30**, and perhaps the article **40** itself will all absorb carbon dioxide and other gases until equilibrium with the internal pressure of the container **50** is reached.

The rate of diffusion of the carbon dioxide into the sachet **30** until equilibrium is reached, and hence the selection of the appropriate materials for the sachet **30**, depends upon the normal distribution time and the normal sales velocity for the container **50**. A longer distribution time will permit the use of a material with a lower diffusion rate. For example, a sachet **30** made from a thin film PET material will take about two (2) weeks to come to equilibrium. A polypropylene sachet **30** would have a faster diffusion rate while a nylon sachet **30** would be somewhat slower. The expected ambient temperature also must be considered. A higher temperature generally increases the diffusion rates.

When the consumer opens the container **50**, the carbon dioxide and other gases within the container **50** rush out through the orifice **72** in the top lid **70** of the container **50**. The pressure within the container **50** drops from its sealing pressure of, for example, fifty-five (55) pounds per square inch, to atmospheric pressure. The carbon dioxide and other gases within the sachet **30**, however, cannot immediately evacuate the sachet **30** like the gases within the container **50**. Rather, the gases remain trapped within the sachet **30** under pressure. This pressure differential causes the delivery device **10** to rise to the top of the container **50**. One end of the delivery device **10** may extend out through the orifice **72** or the consumer may maneuver the delivery device **10** or the container **50** until the delivery device **10** extends through the orifice **72**. The consumer then removes the delivery device **10** from the container **50**. The consumer removes the sachet **30** from the prize tube **20**, opens the sachet **30**, and removes the article **40**. The consumer may then consume the beverage.

Although the sachet **30** is described as being positioned within the prize tube **20**, the use of the prize tube **20** is not required. The prize tube **20** generally ensures that the sachet **30** does not burst or inflate to the extent that the sachet **30** cannot be removed from the container **50** by the consumer. The prize tube **20** is not required to ensure that the sachet **30** first sinks, or at least is suspended, within the container **20** and then rises when the container **50** is opened. Likewise, the sachet **30** itself may be made from a rigid material similar to the prize tube **20**. For example, the sachet **30** may be in the form of a rigid, substantially sealed polypropylene tube. Such a sachet **30** has excellent gas permeation rates, does not need a separate prize tube **20**, but may be somewhat more difficult for the consumer to open.

The embodiments of FIGS. **4** and **5** provide for either additional lift, as in the case of the float **80**, or less lift in the case of the weight **90**. Depending upon the materials used for the prize tube **20**, the sachet **30**, and the article **40**, various combinations of the float **80** and the weight **90** may be employed. The goal in determining the nature of the materials for the prize tube **20**, the sachet **30** and the article **40**, along with the decision on whether to use the float **80** and the weight **90**, is to have the density of the delivery device **10** as a whole more than the density of the beverage when the device **10** is originally inserted into the container **50** such that the device **10** will sink or at least not float to the top of the container **50**. Other considerations include the extent of the air content in the delivery device **10** that may impact upon its buoyancy.

As is shown in FIG. **6**, the delivery device **10** also can be used with a delivery tube **100** or other type of delivery system. The delivery tube **100** can be any type of substantially rigid tube positioned to ensure that the sachet **30** floats to the top of the can **70** in the immediate vicinity of the orifice **72**. For example, the delivery tube **100** can be attached via links **110** to the bottom of the container **50**, to the cylindrical body **60**, or around the top of the cylindrical body **60** in a conventional manner. The sachet **30** is dropped into position within the delivery tube **100** and the cylindrical body **60** is placed into the high speed seaming process as described above. Because the delivery device **10** sinks or is suspended within the cylindrical body **60**, the cylindrical body **60** and the lid **70** can be joined without any interference.

The delivery device **10** also can be used with known delivery systems regardless of how the container **50** is sealed. The ability of the delivery device **10** to rise within the container **50** because of the pressure differentiation allows the delivery device **10** to replace known article containers. The speed and force with which the delivery device **10** rises within a container **50** ensures a dynamic and improved release of the article **40** regardless of how the delivery device **10** is positioned within the container **50**.

The use of the gas permeable sachet **30** also can have applications outside the prize or promotion field. For example, the sachet **30** can enclose a drinking straw as the article **40**. The drinking straw is sealed within the sachet **30** and then dropped into the container **50** as described above. Further, in the case of the drinking straw or similar objects, there is no need for the sachet **30** material to be substantially liquid impermeable. The penetration of liquid to the drinking straw or similar object will not have any impact on its use. Alternatively, the sachet **30** for an article **40** such as the drinking straw need not have the same burst strength as is required for the sachet **30** designed to keep the article **40** dry, depending upon the density of the article **40**.

Further, the sachet **30** with relatively low burst strength also may be desired. The sachet **30** may enclose, for example, a fragrance intended to be released when the consumer opens the container **50**. The material for the sachet **30** may have a low enough burst strength that the sachet **30** will rupture when the container **50** is opened, thereby giving the consumer an immediate burst of fragrance.

It should be understood that the foregoing relates only to preferred embodiments of the present invention, and that numerous changes may be made therein without departing from the spirit and scope of the invention as defined by the following claims.

I claim:

1. A delivery system for an article sealed within a pressurized beverage container, comprising:

a sachet;

said sachet comprising a gas permeable and substantially liquid impermeable material;

said article sealed within said sachet such that said article remains substantially dry while gases from within said pressurized beverage container penetrate into said sachet; and

a hollow tube;

said sachet positioned within said hollow tube such that said sachet remains intact as said gases from within said pressurized beverage container penetrate into said sachet.

2. The delivery system of claim **1**, wherein said gas permeable and substantially liquid impermeable material comprises a thermoplastic material.

3. The delivery system of claim **2**, wherein said thermoplastic material comprises polypropylene.

4. The delivery system of claim **2**, wherein said thermoplastic material comprises polyethylene.

5. The delivery system of claim **2**, wherein said thermoplastic material comprises polyethylene terephthalate.

6. The delivery system of claim **1**, wherein said gas permeable and substantially liquid impermeable material comprises a specific gravity greater than about 1.0.

7. The delivery system of claim **1**, wherein said gas permeable and substantially liquid impermeable material comprises a thin film.

8. The delivery system of claim **1**, wherein said hollow tube comprises a substantially rigid material.

9. The delivery system of claim **1**, wherein said hollow tube comprises as thermoplastic material.

10. The delivery system of claim **1**, further comprising a float positioned about said hollow tube.

11. The delivery system of claim **1**, further comprising a weight positioned about said hollow tube.

12. The delivery system of claim **1**, wherein said article comprises a bank note.

13. The delivery system of claim **1**, further comprising a delivery tube positioned within said beverage container and wherein said hollow tube is positioned therein.

14. A beverage container with an internal sachet, comprising:

a cylindrical body;

a lid for sealing said cylindrical body;

said lid comprising an orifice;

a delivery tube positioned within said cylindrical body in the vicinity of said orifice; and

said sachet positioned within said delivery tube;

said sachet comprising a gas permeable material with a specific gravity more than about 1.0 and a gas permeation rate of more than about 20 cc.-mil./100 sq.in-day-atm.

15. The beverage container of claim 14, wherein said sachet further comprises a substantially liquid impermeable material.

16. A method for delivering an article in a beverage container, comprising the steps of:

sealing said article in a sachet that is gas permeable and substantially liquid impermeable;

filling said beverage container with a carbonated beverage;

dropping said sachet in said beverage container such that said sachet sinks within said container;

pressurizing said beverage container;

penetrating said sachet with gases from said carbonated beverage until the pressure within said container and said sachet are at equilibrium; and

opening said container such that said pressure within said container is released and said pressure within said sachet causes said sachet to rise within said container.

17. A method for delivering an article in a beverage container, comprising the steps of:

sealing said article in a sachet that is gas permeable and substantially liquid impermeable;

dropping said sachet in said beverage container;

filling said beverage container with a carbonated beverage;

pressurizing said beverage container;

penetrating said sachet with gases from said carbonated beverage until the pressure within said container and said sachet are at equilibrium; and

opening said container such that said pressure within said container is released and said pressure within said sachet causes said sachet to rise within said container.

18. A method for delivering an article in a beverage container, comprising the steps of:

sealing said article in a sachet that is gas permeable and substantially liquid impermeable;

placing said sachet in a hollow tube such that said sachet substantially fills said hollow tube;

filling an open-ended beverage container with a carbonated beverage;

dropping said hollow tube, with said sachet therein, in said beverage container such that said hollow tube sinks within said container;

passing a top lid over said open end of said beverage container;

seaming said top lid into place such that said container is pressurized;

penetrating said sachet with gases from said carbonated beverage until the pressure within said container and said sachet are at equilibrium; and

opening said container such that said pressure within said container is released and said pressure within said sachet causes said sachet to rise within said container.

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